REMARKS

1. **STATUS OF THE CLAIMS**

Claims 1-31 are pending.

Claims 23-31 were previously withdrawn by the Examiner as being directed to a non-elected invention.[1]

Claim 1's preamble is currently amended, and step c) is added, to recite "detecting an altered" level of hematopoietic progenitor cell adhesion to target tissue that is not bone marrow endothelial tissue. Support is in the Specification's teaching of adhesion assays.[2] Further support is in the Specification's teaching that each of recombinant soluble VCAM (rsVCAM) and $\alpha4\beta1$ antibodies (which are exemplary agents that alters specific binding of integrin $\alpha4\beta1$ to an integrin $\alpha4\beta1$ ligand) blocked adhesion of endothelial progenitor cells (EPC) (which are an exemplary hematopoietic progenitor cell) to endothelial cells (which are exemplary target tissue that is not bone marrow endothelial tissue).[3] In particular, the Specification teaches:

> "To determine whether EPCs can attach to proliferating vascular endothelium that has been stimulated by angiogenic growth factors, we plated EPCs labeled with DiI-acetylated LDL onto proliferating endothelial monolayers. EPCs bound strongly to endothelium in a $\alpha4\beta1$ dependent manner (Figure 17C) and . . . rsVCAM blocked EPC attachment to endothelial monolayers (Figure 17D). Similar results were obtained when $\alpha4\beta1$ antibodies or rsVCAM were pre-incubated with EPCs, but not when they were pre-incubated with endothelial monolayers."[4]

Yet more support is provided by the following teaching that rs VCAM and by anti-integrin $\alpha4\beta1$ antibodies (which are exemplary agents that alter specific binding of integrin $\alpha4\beta1$ to an integrin $\alpha4\beta1$ ligand) blocked adhesion of endothelial stem cells (which are exemplary hematopoietic progenitor cells) to endothelial cells (which are exemplary target tissue that is not bone marrow endothelial tissue):

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1 Prior Office Action mailed 8/25/2009, page 2, 3rd paragraph.
2 Specification, page 82, 2nd paragraph, entitled "E. Adhesion and migration assays."
3 Specification, Examples 10, beginning on page 86.
4 Specification, page 86, 2nd paragraph.

> "To determine whether stem cells can attach to endothelial cells (ECs) in an $\alpha 4\beta 1$ dependent manner, we plated fluorescently labeled stem cells on confluent EC monolayers, which express the $\alpha 4\beta 1$ ligand VCAM (Figure 34c). Stem cells bound strongly to ECs (Figure 34d-e). This adhesion was blocked by antibody antagonists of $\alpha 4\beta 1$ but not by control antibodies (anti-$\alpha v\beta 5$) (Figure 34d-e). Attachment was also blocked by recombinant soluble VCAM, a competitive inhibitor of integrin $\alpha 4\beta 1$ function."[5]

New Claim 32 has been added to recite that the target tissue comprises "vascular endothelial tissue" as supported by originally filed Claim 6.

New claim 33 has been added to recite exemplary angiogenic diseases, as supported by the Specification's teaching on page 4m, lines 22-25:

> "In one embodiment, the disease is angiogenic, such as, without limitation, one or more of neoplasm, diabetic retinopathy, macular degeneration associated with neovascularization, psoriasis hemangiomas, gingivitis, rheumatoid arthritis, osteoarthritis, inflammation, and inflammatory bowel diseases."

Claim amendments were made notwithstanding Applicant's belief that the unamended claims would have been allowable, without acquiescing to any of the Examiner's arguments, and without waiving the right to prosecute the unamended (or similar) claims in another application, but rather for the purpose of furthering Applicant's business goals and expediting the patent application process in a manner consistent with the PTO's Patent Business Goals (PBG).[6]

2. SUMMARY OF INTERVIEW

Applicants' representative, Dr. Maha Hamdan and Examiner Michail A. Belyavskyi participated in a telephone interview on May 25, 2010 and discussed Applicants' proposed

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[5] Specification, page 94, 1st paragraph.
[6] 65 Fed. Reg. 54603 (September 8, 2000).

amendment that was sent to the Examiner via facsimile on the same day. The Examiner stated that he will consider the amendment as part of the response to the Office Action.

3. WITHDRAWN REJECTIONS

Applicant notes, with appreciation, that the Examiner withdrew the prior rejection of Claims 1-21 under 35 U.S.C. §102(e) for alleged anticipation by Varner (WO 03/019136), since this rejection has not been reiterated in the instant Office Action.

4. REJECTION OF CLAIMS 1-22 UNDER 35 U.S.C. §102(b) OVER PAPAYANNOPOULOU *et al.* (WO 94/11027)

The Examiner continued to reject Claims 1-21, and newly rejected Claim 22, under 35 U.S.C. §102(b) for alleged anticipation by Papayannopoulou *et al.* (WO 94/11027).[7] Applicant respectfully traverses because Papayannopoulou *et al.* does not disclose the step of "**detecting** an altered level of **adhesion**" of any cells, much less adhesion of the recited hematopoietic progenitor cells to the target tissue "that is not bone marrow endothelial tissue." Rather, Papayannopoulou et al. **detected peripheralization** of $CD34^+$ cells. In view of the above, Papayannopoulou *et al.* fails to expressly disclose a limitation of the claims, and therefore cannot anticipate. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of Claims 1-22 under 35 U.S.C. §102(b) over Papayannopoulou *et al.*

CONCLUSION

Applicant respectfully requests reconsideration of the application in view of the above, which places the claims in condition for allowance. To expedite prosecution, Applicant also

[7] Office Action, page 2, item #4.

respectfully invites the Examiner to **call the undersigned before drafting another written communication**, if any.

Respectfully submitted,

Dated: June 11, 2010

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